DOCUMENT RESUME

ED 062 617 AC 012 587

AUTHOR	Thornton, Barbara
TITLE	Gaming Techniques for City Planning: A Bibliography.
INSTITUTION	Council of Planning Librarians, Monticello, Ill.
PUB DATE	Mar 71
NOTE	15p.; Exchange Bibliography No. 181
AVAILABLE FROM	Council of Planning Librarians, P. O. Box 229, Monticello, Ill. 61856 ($1.50)
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	*Bibliographies; *City Planning; *Decision Making; *Game Theory; Program Administration; Simulation

ABSTRACT

A bibliography which attempts to pull together gaming literature from various fields for the use of city planners is presented. It contains samples from fields related to city planning, especially administration and education. It includes references to simulation, decision-making theory, etc. (Author/CK)

ED 062 617

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
OFFICE OF EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL OFFICE OF EDUCATION POSITION OR POLICY.

Council of Planning Librarians EXCHANGE BIBLIOGRAPHIES

March 1971

181

GAMING TECHNIQUES FOR CITY PLANNING: A Bibliography

Barbara Thornton
Yale University Art Library

AC012587

Mrs. Mary Vance, Editor
Post Office Box 229
Monticello, Illinois 61856

COUNCIL OF PLANNING LIBRARIANS Exchange Bibliography #181

"GAMING TECHNIQUES FOR CITY PLANNING"

A Bibliography Compiled By
Barbara Thornton
Yale University Art Library

Current literature in many fields seems to abound with references to "operational gaming", "heuristics", "systems", "simulation", "zero" and "non-zero sum games", "role playing", etc. This is becoming as true of city planning as management, education and military strategy studies. Each of these areas of study, as well as others, tends to have its own body of "gaming" material ranging from highly mathematical, computer-oriented approaches to simplistic role playing and descriptive approaches. This literature is difficult to compile for the student interested in different branches of gaming because there is very little overlap or cross-reference between the various subjects using gaming methodology.

This bibliography attempts to pull together gaming literature from various fields for the use of city planners. It is by no means a comprehensive list of all material in a given field on gaming. Nor does it necessarily include material from all fields which make use of gaming approaches - for instance, the bibliography contains very few references to mathematical and scientific fields. It does contain samples from fields related to city planning - especially administration and education. Although the main focus is on gaming, the bibliography includes references to simulation, decision-making theory, etc.

This bibliography was compiled from the need to supplement the City Planning Program at Yale University with displays on topics which, although not necessarily warranting a full course, are of enough importance to be included in city planning education. Games like CLUG and METRO are fairly well known to city planning students but there is also a whole body of literature surrounding such games.

The structure of the bibliography is divided according to:

Bibliographies

General - books and magazine articles, journal articles

Centers

Games

Many of the leads for sources were found with the aid of Ritchie Kendall, Yale College; Amy Fine, School of Environmental Design, U. C. Berkeley; and Paul Butkovich, Department of Administrative Science, Yale University.

BIBLIOGRAPHIES

Duke, Richard and Allen Schmidt. Operational Gaming and Simulation in Urban Research: An Annotated Bibliography, East Lansing, Michigan: Institute for Community Development, Bibliography No. 14, January 1965.

Hartman, John J. Annotated Bibliography on Simulation in the Social Sciences, Ames: Iowa State University Agricultural and Home Economics Experimental Station, 1966, (a report submitted to the U. S. Office of Civil Defense).

Horn, Robert E. and David W. Zuckerman, eds. The Directory of Informational Games and Simulations, Cambridge, Massachusetts: Information Resources, Inc., Spring 1970.

Johnson, Edward R. Simulation and Gaming in Business and Economics in the 1960's: A Bibliography, Iowa City: College of Business Administration, The University of Iowa, May 1969. 48p.

Loveluck, Clive. A Bibliography and Analysis of Business Games, London: BLITA, (undated).

McClintock, C. G. and D. M. Messick. Empirical Approaches to Game Theory and Bargaining - A Bibliography, New Haven, Connecticut: Yale University, Department of Administrative Science, March 1966.

Nagelberg, Mark. Simulation of Urban Systems - A Selected Bibliography, Middletown, Connecticut: Institute for the Future, Riverview Center, January 1970.

Nagelberg, Mark and Dennis L. Little. Selected Urban Simulations and Games, Middletown, Connecticut: Institute for the Future, Riverview Center, April 1970.

Riley, V. and J. P. Young. Bibliography on War Gaming, Chevy Chase, Maryland: The Johns Hopkins University, April 1, 1957.

Shubik, Martin. "Bibliography on Simulation Gaming Artificial Intelligence and Allied Topics," Journal of the American Statistical Association, LV, December 1960, pp. 736-751.

Smit, Peter H. Gaming Bibliography, Architecture Department School of Environmental Design, University of California, Berkeley, 1970.

Twelker, Paul A. "A Basic Reference Shelf on Simulation and Gaming," a Series One Paper from ERIC, Palo Alto, California: Stanford, June 1970.

Twelker, Paul A., ed. Instructional Simulation Systems: An Annotated Bibliography, Corvallis, Oregon: Continuing Education Publications, Waldo Hall 100, 1969.

U. S. Department of State, Bureau of Intelligence and Research, External Research Staff. Game Theory and Its Application to the Social Sciences: A Bibliography, External Research Paper 145, January 1964.

4. CPL Exchange Bibliography #181

Werner, Roland and Joan Werner. Bibliography of Simulations: Social Systems and Education, La Jolla, California: Western Behavioral Sciences Institute, 1150 Siverado, 1969. 178p.

GENERAL

Alexander, Christopher. "The Coordination of the Urban Rule System" in 1965 Internationale Regio Planertagung Regio, Basel, 1965, pp. 168-176.

Allen, Layman E. "Games and Programmed Instruction," Communication Sciences and Law: Reflections from the Jurimetrics Conference, Layman E. Allen and Mary E. Caldwell (eds.), New York: Bobbs-Merrill Co., 1965, pp. 347-372.

American Management Association. Simulation and Gaming: A Symposium, No. 55, New York: American Medical Association, 1961.

Anderson, L. F., et. al. "A Comparison of Simulation, Case Studies and Problem Papers in Teaching Decision-Making" Evanston, Illinois: Northwestern University, 1964. (mimeo).

Babb, E. M., et. al. "The Potential of Business-Gaming Methods in Research," Journal of Business, 39:465-72 (October 1966).

Becht, J. Edwin and Paul H. Rigby. "MANTRAP-Management Training Program; Providing Decision Making Experiences for Managerial Training Through the Use of Simulation or 'Games'," Iowa Business Digest, 35:8-10 (May 1964).

Berge, Claude and Ghouila-Houri. Programming Games and Transportation Networks, New York: Wiley, 1965.

Behavioral Simulation Newsletter (formerly RPI Simulation Newsletter). Behavioral Simulation and Gaming Group, Political Science Dept., Peoples Avenue Complex, Bldg. D, Rennselear Polytechnic Institute, Troy, New York, 12181 Marshall Whited, ed. (issued on irregular basis).

Berkeley, Ellen Perry. "New Gamesmanship," in Architectural Forum, December 1968, pp. 58-63.

Berkman, H. G. "Game Theory of Land Use Determination," in Land Economics, 41:1, (1965), pp. 11-19.

Bolan, Richard S., et. al. "Planning Applications of a Simulation Model" paper prepared for the New England Section, Regional Science Assoc., Fall Meeting, Boston College, Boston: Regional Science Assoc., October 1963.

Boocock, Sarane S., E. O. Schild, eds. Simulation Games in Learning, Beverly Hills, California: Sage Publ., 1970.

Boot, J. C. G. and S. Wage. "A Management Game for Students: the Rules, the Analysis, the Model-an Instruction for Instructors," Netherlands: Netherlands School of Economics and Institute of Management Sciences, June 1962.

Borch, Karl Henrik. The Economics of Uncertainty, Princeton, New Jersey: Princeton University Press, 1968.

Buchler, I., H. Nutini. Game Theory, Pittsburgh, Pennsylvania: University of Pittsburgh Press, 1969.

Carnegie Institute of Technology. A Manual for Players of the Carnegie Tech Management Game, Pittsburgh, Pennsylvania: Carnegie Institute of Technology, November 1961.

Carver, K. R. and J. L. Taylor. "Instructional Simulation and Urban Redevelopment," Journal of Town Planning Institute, 53:10 (December 1967), pp. 443-447.

Chernowitz, G. Simulation and War Games, University Seminar No. 448, New York: Columbia University, April 1962.

"Clug," in Newsweek, November 27, 1967.

Cohen, Kalman J. and Eric Rhenman. "The Role of Management Games in Education and Research," Management Science, 7 (1961), pp. 131-166.

Consad Research Corp. "Simulation and Modelling Methods and Techniques at Baltimore, Maryland," Pittsburgh, Pennsylvania: Consad Research Corp., 1968.

Cornell University. Division of Urban Studies. "Selected Papers on Operational Gaming," Ithaca, New York: Cornell University, 1966.

Crecine, John P. Accessiblity, Esternalities, and Urban Structure: A Computer Simulation Model, Ann Arbor: University of Michigan Press, 1967.

_____. Computer Simulation in Urban Research, Santa Monica, California: The Rand Corporation, November 1967.

Cushen, Walter E. "Operational Gaming in Industry," Operational Research for Management, V.2, edited by J. F. McCloskey and John McCoppinger, Baltimore, Maryland: The Johns Hopkins Press, 1956.

Dale, Alfred G. and Chas R. Klasson. "Business Gaming: A Survey of American Collegiate Schools of Business." Austin, Texas: Bureau of Business Research, University of Texas, 1965.

Dresher, Melvin; L. S. Shapley and A. W. Tucker, eds. Advances in Game Theory, Princeton, New Jersey: Princeton University Press, 1964.

Duke, Richard D. "Gaming Simulation in Urban Research," East Lansing, Michigan: Institute for Community Development and Services, Michigan State University, June 1964.

_____. "Gaming Urban Systems," Reprint Series, East Lansing, Michigan: Institute for Community Development and Services, Michigan State University, No. 30, 1965-1966.

Duke, Richard D. and Barton Burkhalter. "The Application of Heuristic Gaming to Urban Problems," East Lansing, Michigan: Center for Community Development and Services, Michigan State University, 1966.

Duke, Richard D.; A. G. Feldt; Paul Ray. "The Environment of Decision-Makers in Urban Simulations," in William Coplin, (ed.), Simulation in the Study of Politics, Chicago, Illinois: Markham Publishing Co., 1968.

Duke, Richard D. and R. L. Meier. "Gaming Simulation for Urban Planning," Journal AIP, 32 (January 1967), pp. 3-17.

Dyckman, John W. "Planning and Decision Theory," JAIP, 27 (November 1961), pp. 335-345.

Feldt, Allan G. "Operational Gaming in Planning Education," JAIP, 32 (January 1966), pp. 17-23.

Feldt, Allan G. "Cornell Conference on Interdisciplinary Applications of Gaming Techniques to Land Use Regulation", mimeo. Ithaca: Cornell University, 1964.

Fraser, Herbert W. "Simulation and the Game Approach to the Teaching of Economic Principles," St. Louis: Washington University, 1962, unpublished paper.

Friedman, J. W. "An Experimental Study of Cooperative Duoply," New Haven: Yale University, CF 50428.

Gale, David. The Theory of Linear Economic Models, New York: McGraw-Hill, 1960.

Graham, Robert G. and Clifford F. Gray. Business Games Handbook, New York: American Management Assoc., Inc., 1969.

Grundstein, Nathan D. "Computer Simulation of a Community for Gaming," Paper prepared for the Annual Meeting of the American Assoc. for the Advancement of Science, Denver, December 1961.

Grundstein, N. D. and A. G. Khan. The Development Administration Game. A Conceptual Formulation, Pittsburgh, Pennsylvania: University of Pittsburgh, (1961?).

Guetzkow, H. Simulation in Social Science, Englewood Cliffs, New Jersey: Prentice Hall, 1962.

Harary, F., et. al. "Analysis of Interconnected Decision-Making Areas," Nature 206 (1965), (118-130).

Harris, Britton. "Urban Development Models: New Tools for Planning," JAIP, 31 pp. 90-95.

Helmer, O. and F. S. Quade. "An Approach to the Study of a Developing Economy by Operational Gaming," The Rand Corporation, P-2718, March, (1967?).

Hendricks, F. H. "Planning Operational Gaming Experiment," a paper presented to the No. California chapter of the American Institute of Planners meeting, (San Francisco), November 19, 1960.

Hoos, Ida R. "Systems Analysis as a Technique for Solving Social Problems - A Realistic Overview," Proceedings: Association for Computer Machinery Symposium: Application of Computers to the Problems of Urban Society, 1968.

Horgan, Richard A. A Game Theoretic Description of Collective Bargaining, Industrial Administration Honors Project, New Haven, Connecticut: Yale University, 1964.

House, Peter. "The Simulated City: The Use of Second Generation Gaming in Studying the Urban Systems." Proceedings: Association for Computer Machinery Symposium: Application of Computers to the Problems of Urban Society, 1968.

House, Peter and Philip D. Patterson, Jr. "An Environmental Gaming Simulation Laboratory," JAIP, V. 35, No. 6, November 1969.

Inbar, Michael, Carice S. Stoll, eds. "Social Simulations." Special issue of American Behavioral Scientist, 12, 6, July-August 1969.

Isard, Walter. "Game Theory, Location Theory and Industrial Agglomeration," Regional Science Association, papers and proceedings, 18, (1966), pp. 1-11.

Joint War Games Agency Organization. Catalog of War Gaming Models, Joint War Games Agency Organization, Washington: Joint Chiefs of Staff, January 1966.

Journal of Conflict Resolution.

Karlin, Samuel. Mathematical Methods and Theory in Games, Programming, and Economics, Reading, Massachusetts: Addison-Wesley Publishing Co., (1962, c.1959).

Kibbee, J. M.; C. J. Craft; B. Nanus. Management Games, Reinhold Publishing Corp., 1961.

Kibel, Barry M. "Gaming Simulation of Urban Spatial Process", Ph.D. thesis draft, Berkeley: University of California, 1970.

Kuhn, M. W. and A. W. Tucker. Contributions to the Theory of Games, Princeton, New Jersey: Princeton University Press, (1965).

Levin, P. H. Decision Making in Urban Design, Building Research Station Current Papers, Design Series No. 49, Building Research Station, 1966.

_____. "Design Process in Planning," Town Planning Review, 37(I), (1966).

_____. "Toward Decision Making Rules for Urban Planners," Journal of Town Planning Institute, 53:10 (December 1967), pp. 443-447.

Long, Norton. "The Local Community as an Ecology of Games," American Journal of Sociology, 64 (1958), pp. 251-256.

Long, Wesley H. "Downtown: An Economic-Environmental Simulation Game," paper for Environmental Design Research Association Conference, Pittsburgh, Pennsylvania, December 1970.

Lowry, Ira S. "A Short Course in Model Design," JAIP, 31 (May 1965), pp. 158-165.

Luce, R. Duncan and Howard Raiffa. Games and Decisions: Introduction and Critical Survey, New York, New York: John Wiley and Sons, Inc., 1957.

Matthews, Jack. "Computer Game: Santa Cruz", thesis draft, New Haven, School of Art and Architecture, Yale University, 1971.

Meier, Richard L. "Game Procedure in the Simulation of Cities," in The Urban Condition, edited by Leonard J. Duhl, New York, New York: Basic Books, 1963.

Meier, R. L. and R. Duke. "Simulations for Planning," in Planning, (1965), pp. 286-300.

National Gaming Council. The Gaming Newsletter, Washington, 1969.

Osgood, Steve and Nick Jeffrey. "Simulation and Communication in the Planning Machine," in Arena (Architectural Association Journal) 82 (April 1967), pp. 243-246.

Political and Social Simulation Newsletter. Haverford College, Haverford, Pennsylvania, 19041 David Hsia, ed.

Preston, Maurice and Alan Coddington. "The Elementary Ideas of Game Theory," Centre for Administrative Studies (CAS), occasional paper No. 6, Great Britain Treasury, British Information Services, 1967.

Rapoport, Anatol and Albert M. Chammah. Prisoners Dilemma: A Study in Conflict and Cooperation, Ann Arbor, Michigan: University of Michigan Press, 1965.

Rapoport, Anatol. "The Use and Misuse of Game Theory," Scientific American, November 1962.

Robinson, Ira M.; Harry B. Wolfe and Robert L. Barringer. "A Simulation Model for Renewal Programming," in JAIP, 31 (May 1965), pp. 126-134.

Robinson, James A. "Simulation and Games," unpublished paper, Ohio State University, Department of Political Science, 1965.

Schelling, Thomas C. The Strategy of Conflict, Cambridge, Massachusetts: Harvard University Press, 1960.

Schlager, Kenneth J. "Simulation Models in Urban Planning," Pittsburgh Information Systems, 1964.

Shubik, Martin, ed. Game Theory and Related Approaches to Social Behavior, New York, New York: Wiley, (1964).

Shubik, Martin. Readings in Game Theory and Political Behavior, New York, New York: Doubleday, 1954.

_____. Strategy and Market Structure: Competition, Digopoly and the Theory of Games, New York, New York: Wiley, (1960, c.1959).

"Simulation Games, What, Why, How, Where," Instructor, Vol. 79, March 1970.

Simulation, Simulation Councils, Inc., P. O. Box 8248, San Diego, California, John Mcleod, ed.

Simulation: Managing the Unmanageable, System Development Corp., (magazine), Santa Monica, California.

Simulation and Games, ed. Michael Inbar, Sage Publication, Beverly Hills, California.

Smith, Robert G The Systems Approach and the Urban Dilemma, Program of Policy Studies in Science and Technology, Staff Discussion Paper, Washington, D.C.: George Washington University, 1968.

Spencer, Donald D. Game Playing with Computers, New York, New York: Spartan Books, 1968.

Social Education, 33, 2, February 1969, "Simulation: The Game Explosion," pp. 176-199.

Taylor, John L. "Notes on the Use of Gaming-Simulation in Planning Education," Journal of the Town Planning Institute, January 1967.

Taylor, John. Instructional Planning Systems: A Gaming Simulation Approach to Urban Problems, published soon, Great Britain.

Taylor, John L. and K. R. Carter. "Instructional Simulation of Urban Development," JTPI, 53 (December 1967), pp. 443-447.

Taylor, John L. and R. N. Madison. "A Land Use Gaming Simulation," Urban Affairs Quarterly, June 1958.

Taylor, John L. and Richard D. Maddison. "An Introduction to Operational Gaming Procedures in Planning Education," proceedings of the 2nd Salzburg Congress on Urban Planning and Development, SCUPAD Bulletin No. 4, 1967.

Thomas, Clayton J. "The Genesis of Operational Gaming," proceedings of the 1st International Conference on Operational Research, Operational Research Society of America, Baltimore, 1957.

Vajda, Steven. The Theory of Games and Linear Programming, Science Paperbacks, London: Methuen, (1967).

Von Newmann, John and Oskar Morgenstern. Theory of Games and Economic Behavior, (3rd ed.) Princeton, New Jersey: Princeton University Press, 1966 (1944).

CENTERS

Abt Assoc., Inc., 55 Wheeler Street, Cambridge, Massachusetts 02138 (617-491-8850).

Academic Games Associates, 430 East 33rd Street, Baltimore, Maryland 21218.

American Council on Educational Simulation and Gaming (ACESG), P. O. Box 5131, Industrial Station, 453 North Shelling Avenue, St. Paul, Minnesota.

American Education Research Assoc., (AERA), Special Interest Group: Simulation Systems, University of Kentucky, Lexington, Kentucky.

Applied Simulations International (Environmentrics), Suite 900, 1100 - 17th Street, N.W., Washington, D.C. 20036.

Behavioral Sciences Laboratory, College of Social and Behavioral Sciences, Ohio State University, 404-B W. 17th Avenue, Columbus, Ohio 43210.

Behavioral Simulations and Gaming Group, Political Science Department, Peoples Avenue Complex, Building D Rennesselaer Polytechnic Institute, Troy, New York 12181.

Board of Cooperative Educational Services in Northern Westchester (BOCES), Center for Educational Services and Research, (First Supervisory District), 845 Fox Meadow Road, Yorktown Heights, New York 10598 (914-245-7031).

Carnegie Institute of Technology, Graduate School of Industrial Administration (GSIA), Scheneley Park, Pittsburgh, Pennsylvania 15213 (412-621-2600).

The Didactic Games, Co. and Didactic Systems, Inc., P. O. Box 500, Westbury, New York 11590.

Environmental Simulation Laboratory, University of Michigan, Ann Arbor, Michigan.

Environmetrics, The National Gaming Council, 1100 - 17th Street, N.W., Washington, D.C. 20036.

Hall Sprague and Assoc., Project Simile, Western Behavioral Sciences Institute, 1121 Torrey Pines Road, La Jolla, California 92037 (714-459-3811).

Information Resources, Inc., 96 Mount Auburn Street, Cambridge, Massachusetts 02138.

Institute for the Future, Riverview Center, Middletown, Connecticut 06457.

Instructional Simulations, Inc. (ISI), 2147 University Avenue, St. Paul, Minnesota 55104.

The Johns Hopkins University, Department of Social Relations, Charles and 34th Streets, Baltimore, Maryland 21218, (301-467-3300 X800).

Learning Games Associates, (WFF'N PROOF), 2253 Medford Road, Ann Arbor, Michigan 48102.

Northwestern University International Relations Program, Department of Political Science, Northwestern University, Evanston, Illinois, (312-492-3741).

Political Institutions Simulation Laboratory (POLIS), University of California, Political Science Department, Santa Barbara, California 93106.

Simulation Councils, Inc. (SCI), 1010 Pearl Street, (P. O. Box 2228), La Jolla, California 92037.

Simulated International Processes Project of the International Relations Program, 1834 Sheridan Road, Northwestern University, Evanston, Illinois 60201.

Sociology Department, University of Michigan, Ann Arbor, Michigan 48104 (Center for Research on Conflict Resolution), (Center for Regional Planning).

Systems Development Corp., Santa Monica, California.

GAMES

Abt Assoc., Inc., POLLUTION, Cambridge, Massachusetts (for Wellesley, Massachusetts public schools).

Abt Assoc., Inc., NEIGHBORHOOD, Cambridge, Massachusetts (for Wellesley, Massachusetts public schools).

Berger, Jerry, TRADE OFF, La Clede Town Co., 3190 Lawton, St. Louis, Missouri.

Bolan, Richard, and David Seidman, POLIMETRIC, Boston, Philadelphia: Traffic Research Corp. and Delaware Valley Regional Planning Commission, ca. 1962.

Chapin, Stewart, UNC Model (University of North Carolina Model), Greensboro, North Carolina: University of North Carolina, 1961-1964.

Cohen, K. J.; W. R. Dill; A. A. Kuehn; P. R. Winters. "The Carnegie Management Game: An Experiment in Business Education," Homewood, Illinois: Irwin Inc., 1964.

Duke, Richard and Richard Meier, METRO, Environmental Simulation Laboratory, University of Michigan, Ann Arbor, Michigan, 1966.

Duke, Richard, et al., APEX (Air Pollution Exercise), University of Michigan, University of Southern California, 1969.

Forrester, Jay W., URBAN DYNAMICS, Cambridge, Massachusetts: Massachusetts Institute of Technology, 1968-1969.

Fuller, Buckminster, WORLD GAME, Box 909, Carbondale, Illinois.

Hamburg, John; George Haikalis; Morton Schneider, PATS (Pittsburgh Area Transportation Study), Pittsburgh, 1959-1963.

Hamburg, John R.; George Lathrop; Morton Schneider, CATS (Chicago Area Transportation Study), Chicago, 1958-1965.

Hendricks, Francis H., P.O.G.E. (Planning Operational Gaming Experiment), U. S. Navy, (also, paper prepared for the Northern California Chapter, American Institute of Planners, Professional Meeting on "New Ideas in Planning," November 19, 1960.), 1962-1964.

Hill, Donald M., EMPIRIC, Boston, Massachusetts: Traffic Research Corp., 1962.

House, Peter, CITY I, Washington, D.C.: Washington Center for Metropolitan Studies, 1968-1969.

House, Peter, CITY II, Washington, D.C.: Environmentrics, 1100 - 17th Street, N.W., 1969.

House, Peter, REGION, Washington, D.C.: Washington Center for Metropolitan Studies, 1967-1968.

Inbar, Michael, "Simulation of Social Processes: The Disaster Game," Baltimore, Maryland: Johns Hopkins University, Department of Social Relations, 1965, unpublished paper.

Kain, John, THE RAND TRANSPORTATION MODEL, Santa Monica, California: RAND Corp., 1960.

Kaiser Aluminum Corp., FUTURE, 1966.

Lowry, Ira, LOWRY MODEL (or PITTSBURGH MODEL), Pittsburgh, 1963-1966.

Meier, Richard and Richard Duke, METROPOLIS, Environmental Simulation Laboratory, 611 Church Street, Ann Arbor, Michigan 48104, 1960.

Mitchell, Neal, URBAN PLANNING SIMULATION, Cambridge, Massachusetts: Harvard Graduate School of Design, (1968).

Psychology Today, CITIES, ca. October 1968.

Robinson, Ira and Harry Wolfe, SAN FRANCISCO COMMUNITY RENEWAL MODEL (or A.D. Little Model), San Francisco, California: A. D. Little Assoc., 1964.

Steger, William and John P. Crecine, The PITTSBURGH URBAN SIMULATION including TOMM (Time-Oriented Metropolitan Model), Pittsburgh, Santa Monica, Lansing: CONSAD Corp., Rand. 1964.

COUNCIL OF PLANNING LIBRARIANS Exchange Bibliography #181

GAMING TECHNIQUES FOR CITY PLANNING

ERIC Clearinghouse
JUN 6 1972
on Adult Education

Additional copies available from:

Council of Planning Librarians
Post Office Box 229
Monticello, Illinois, 61856

for $1.50.

- - - - - - - - - - -